

chestnut. A related species occurring on the European chestnut is quite different in character and totally different in habit. I have shown specimens to many mycologists, both in Europe and America, and they all pronounce it new to them and undescribed. It belongs to *Diaporthe*, a large genus of the pyrenomycetes, whose species are as a rule confined to dead wood and are not parasitic. The name I have chosen refers to its very destructive parasitic habit. A detailed description follows :

***Diaporthe parasitica* sp. nov.**

Pustules numerous, erumpent, at first yellow, changing to brown at maturity : perithecia usually 10–20 in number, closely clustered, flask-shaped, deeply imbedded in the stroma in the inner bark, scarcely visible to the unaided eye ; necks long, slender, curved, with thick black walls and rather prominent ostiola : asci oblong-clavate, $45-50 \times 9 \mu$, 8-spored ; sporidia usually biseriate, hyaline, oblong, rounded at the ends, often slightly constricted, uniseptate, $9-10 \times 4-5 \mu$. Summer spores very minute, $1 \times 2-3 \mu$, pale-yellowish, cylindrical, slightly curved, discharged in twisted threads as in *Cytospora*.

Found upon living or recently killed branches of the American chestnut, *Castanea dentata*. Type collected by W. A. Merrill in Bronx Park, N. Y. City, November 26, 1905. Known also from New York, New Jersey, Maryland, the District of Columbia and Virginia.

NEW YORK BOTANICAL GARDEN.

SHORTER NOTES

A NEWLY INTRODUCED PLANT IN RHODE ISLAND. — Some eight or ten years ago, as near as I can recall, there appeared on wasteland, near our general passenger station in Providence, a few plants of *Grindelia squarrosa*, belonging, as every one knows, in the far West. There are now several acres of the plant here, and its increase is deterred only by building operations in the neighborhood. If offences must come, in the shape of weeds, it is well to have them handsome — and this *Grindelia* with its globular, many-scaled, sticky involucre and light golden rays, is a beauty. In the same region the Russian thistle has a hold and

Carduus acanthoides flourishes. The persistent rosettes of the last are very large and well suggest the *Acanthus* from which the specific name is derived.

W. W. BAILEY.

BROWN UNIVERSITY, September 14, 1906.

AN ADDITION TO THE FLORA OF BLOCK ISLAND. — The summer flora of Block Island was described, together with a list of species, by W. W. Bailey, in 1893,* and the writer was able to make a few additions to this list during the summer of 1897. † The locality is isolated and absolutely devoid of trees, so that the flora is necessarily very limited and is restricted to such species as can exist on sea beaches or sand dunes, in open swamps or on dry hills. In the latter habitat a few of the species which were established there when the region was covered with trees still persist, and among these it is interesting to note that this year I found numerous specimens of *Botrychium obliquum* Muhl., on the summit of Mohegan bluffs, where it occurs as part of the dense mat of vegetation, consisting largely of *Solidago nemoralis* Ait., *Aster vimineus* Lam., *Achillea Millefolium* L., *Potentilla canadensis* L. and *Panicum dichotomum* L., which covers the hill-tops.

ARTHUR HOLLICK.

NEW YORK BOTANICAL GARDEN.

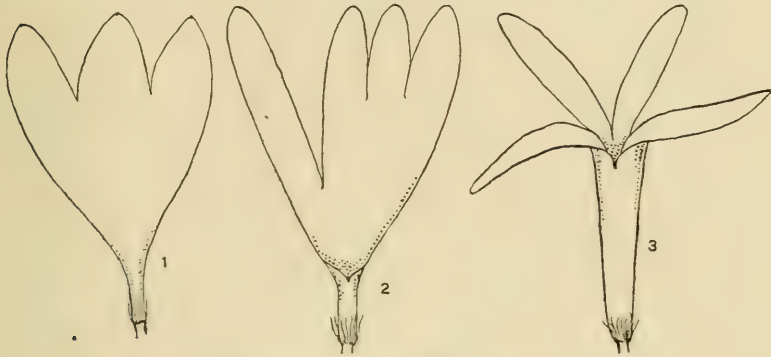
TUBULAR RAY-FLOWERS IN *Gaillardia aristata*. — Among several specimens of *Gaillardia aristata* Pursh, collected near Magnolia, Colo. and Eldora, Colo., a few were found in which the ray-flowers had a tubular form. *Gaillardia aristata* is a very conspicuous species in this region, ranging from the plains to an altitude of 10,000 feet. Examination of the specimens in the University herbarium shows none having these tubular rays. It therefore appears that the abnormality is not common.

The specimens agree with the description given for this species by Britton and Brown in every particular except in the rays. Some of the rays are normal 3-lobed rays, one of which is represented in FIGURE 1. On the same flower-head were found intermediate forms as shown in FIGURE 2, alongside tubular rays as

* Bull. Torrey Club 20 : 227-239. 1893.

† Ann. N. Y. Acad. Sci. 11 : 63-70. 1898.

shown in FIGURE 3. Most of the rays were 5-lobed; some 4- and 6-lobed. Ordinarily the ray-flowers of this species have neither stamens nor pistils, but some of the tubular ray-flowers examined had both sets of organs well developed.



Ray-flowers of *Gaillardia aristata*.

Professor E. A. Kenyon, of Florence, Colo., reports having found similar individuals of this species near Eldora, Colo.

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MYCOLOGICAL NOTES FROM INDIANA—I. *Peronospora Floerkeae* Kellerm.

On the 28th of May a locality near Carmel, Hamilton Co., from which *Floerkea* had been collected in previous years was visited in hopes of finding this fungus. Although the season for the host was well-nigh past, careful search revealed a few plants which were infested. The material contained no conidia and but few oöspores, hence no cultural experiments could be undertaken to determine the true systematic position of this interesting species. In the original description the statement is made that "the host plants are dwarfed by the parasite though not distorted, and usually the entire plant harbors the fungus — all parts of the stem and leaves being evenly, though in the main rather sparsely covered by the conspicuous conidiophores. . . . Later infection is often restricted to the lower leaves of vigorous hosts but such cases

are the exception rather than the rule." * This material, while agreeing with the original description in taxonomic characters; differs materially in the matter of distribution, being very local in occurrence and confined in the main to the upper fourth of the host, upon which it produced no dwarfing effect.

2. *Hydrogera Kleinii* (van Tiegh.) Kuntze (*Pilobolus Kleinii* van Tiegh.).

During September and October last, the form *sphaerospora* Grove of this species was abundant on horse dung in the vicinity of Lafayette. As the only point of difference between this and the typical form of the species is the shape of the spores observations were made to determine the taxonomic value of this character. The sporangia which mature first from any spore-germination contain globular spores while those which mature later contain the typical elliptical spores. The fresher the substratum the greater is the proportion of spherical spores. The form in question is therefore not taxonomically distinct from the typical form. While *Hydrogera* has frequently been reported from the United States, no mention of this species has come to my notice.

3. *Stannaria americana* Masee & Morgan.

This species was first collected by Morgan at Preston, Hamilton Co., Ohio, and later distributed by Kellerman from Hocking Co. † During the present spring it was collected sparingly on *Equisetum hyemale* at Lafayette.

GUY WEST WILSON.

NEW YORK, September 10, 1906.

A HITHERTO UNNOTICED RELATION BETWEEN *VIOLA PEDATA* AND *IRIS VERNA*. — In April, 1906, among the pine ‡-clad mountains of eastern Alabama, two of the most common and conspicuous herbs on dry sunny slopes were *Viola pedata* L. and *Iris verna* L. These species were in full bloom at Easter time in Talladega, Clay, and Tallapoosa Counties, and often grew within a few feet of each other, their habitats being identical.

* Journ. Myc. 10: 171.

† Ohio Fungi 18.

‡ Long-leaf pine, *Pinus palustris*.

Far apart as they are phylogenetically, they resembled each other in still other ways besides habitat and time of flowering. The flowers of both were about the same distance from the ground (four or five inches), borne singly on erect scapes, and, what is more remarkable, colored almost exactly alike. Most persons in the Eastern United States are familiar with the appearance of *Viola pedata*. In the *Iris*, likewise, the petals are pale-blue for the greater part, and white toward their bases. The yellow anthers of the violet are matched by yellow crests on the petals of the iris; and the whole aspect of the two plants is so similar that it is difficult to distinguish them at a few rods distance. Stranger still, the two deep-purple petals occasionally seen in *Viola pedata* have a counterpart in an occasional streak of similar color at the tips of the petals of *Iris verna*.

The points of similarity between these two species are too numerous and striking to be considered merely fortuitous, and yet when we attempt to explain them we are confronted at once with the difficulty of distinguishing between cause and effect. There can be little doubt that both plants are pollinated by the same insects (though direct evidence on this point is lacking), and any complete explanation of the phenomena noted will probably have to take this into consideration. *Viola pedata*, it should be observed, is one of the few violets which have no cleistogamous flowers and therefore presumably depends entirely on insects for pollination.

Analogous resemblances in the same general region are not wanting. For instance, *Lonicera sempervirens*, *Bignonia crucigera*, *Spigelia marilandica* and *Aesculus Pavia*, which grow on bluffs in various parts of Georgia and Alabama, all bloom in late spring and have red flowers about two inches long, more or less yellowish at their extremities.* *Illicium floridanum* has nearly the same habitat and time of flowering and its flowers are of the same color but differently shaped.

ROLAND M. HARPER.

FASCIATIONS IN ARISAEMA, RUDBECKIA, AND VIOLA. — An interesting case of fasciation in *Arisaema triphyllum* was brought

* See Ann. N. Y. Acad. Sci. 17: 105. 1906. [Ined.]

to me by a student a few days ago. (She called it "Siamese-twin Jack-in-the-pulpit.") ¶ Thinking the readers of TORREYA might be interested, I sketched it off and send it₂ to you. While



Fasciation in *Arisaema*.

the spathe is separated-all the way down, the spadix bears only a slight indentation.*

Two summers ago at Cold Spring Harbor, I found an illustration of fasciation in a *Rudbeckia hirta*. The disk was elongated, making three turns of a spiral and would measure at least four inches in length I should say, though the width was normal. The plant stem was three quarters of an inch wide and perfectly flat.

* W. W. Bailey (Bot. Gaz. 9: 177. 1884) alludes to a specimen of *Arisaema triphyllum* from Minnesota, with a "double spathe including a single spadix." Miss Alice G. Clark of East Weymouth, Mass., describes and illustrates (Rhodora 6: 163. 1904) an *Arisaema* inflorescence with two spathes and three spadices.

The accompanying sketch of the specimen as it lies in the preserving jar, may serve to give some idea of its appearance though it shows only the two ends of the disk. I have also indicated the position of the three leaves which show in this view.*



Fasciation in *Rudbeckia hirta*.

A third fasciated blossom was brought to another of our teachers, Miss Ida Clendenin. It is a *Viola tricolor* but the petals were so rolled up that it is impossible to draw it. There are in all seven stamens and nine petals. Each single pansy has but one perfect upper petal, but a small abortive one seems to represent the two missing ones. There is only a slight broadening of the stem in this case, but a series of enlargements at intervals of a half inch give the stem a jointed appearance. There is also a deep groove in the ventral side.

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May 21, 1906.

* W. W. Bailey (Bull. Torrey Club 8: 93. 1881) notes fasciation in *Rudbeckia hirta*, "four heads" being united. Later (Bull. Torrey Club 18: 374. 1891), he describes another case with stem "at its narrowest part over an inch in width" and mass of heads "all of five inches across."